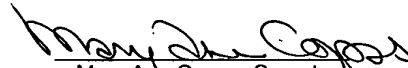


AP/1742
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Mary Ann Copas, Secretary

In the Application of: Wolfgang Peter, et al.

Ser.No.: 09/651,797

Filed: 30 August 2000

For: METHOD AND APPARATUS FOR TREATMENT OF METALLIC
WORKPIECES

Art Unit: 1742

Examiner: SIKYIN IP

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APPELLANT'S REPLY BRIEF

The Applicant submits the following for its reply brief and respectfully requests consideration of same. The Examiner's statement that the Appeal Brief does not contain a statement identifying related appeals and interferences is not understood. The Appeal Brief does in fact include such a statement. The Applicant requests withdrawal of the rejections made and that the Application be placed in line for Allowance.

ARGUMENT

§103(a)--German Patent No. 9400222.3 to Wunning

The §103(a) rejections are improper since the differences in the subject matter of the present invention and the cited reference would not be obvious at the time of invention to one of ordinary skill in the art. Claim 6 and Claims 8 -16 dependent therefrom and Claims 17 and Claims 18 - 20 dependent therefrom stand rejected under 35 U.S.C. §103(a) as obvious over the single applied reference G9400222.3 to Wunning. 35 U.S. C. §103(a) sets forth that:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The Examiner has in his Answer argued that essentially a laminar flow is known by disclosure in G9400222.3 in its Fig. 1 "of a cooling chamber with nozzle plate (10) and cooling plate (11), such that nozzle plate (10) can be lowered onto the workpieces positioned in the cooling chamber", such that "nozzle plate (10) is placed at top of workpieces to make cooling gas flow in lengthwise direction and no rebounding flow," which according to the Examiner thereby "read on laminar cooling." (Answer, p. 4, last para. to p. 5, first para.) The Examiner goes on to cite, as precedent for his proposition, the following cases involving obviousness of chemical compounds: In re Gyurik, 596 F.2d 1012, 1018, 201 U.S.P.Q. 552, 557 (1979); In re May, 574 F.2d 1082, 1094, 197 U.S.P.Q. 601, 611 (CCPA 1978); and In re Hoch, 428 F.2d 1341, 1344, 166 U.S.P.Q. 406, 409 (1970). However, each of these long-settled cases deals only with the

principle that in obviousness rejections based on close similarity in chemical structure, the necessary motivation to make a claimed compound, and thus the prima facie case of obviousness, rises from the expectation that compounds similar in structure will have similar properties. The present invention is not a case involving a chemical compound.

There is no discussion of cases of mechanical structure and presumptions which would be involved here. The "test" suggested by the Examiner in his office actions and in his Answer is therefore improper.

The Examiner is engaging in improper hindsight in his attempts to find motivation for one of ordinary skill in the art to make the claimed invention from one of "similar structure" as he suggests. Obviousness hinges on four factual findings: "(1) the scope and content of the prior art; (2) the differences between the prior art and the claims; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness." Nat'l Steel Car, Ltd., v. Can. Pac. Ry., Ltd., 357 F.3d 1319, 1334 (Fed.Cir.2004). However, "[d]efining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness," Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH, 139 F.3d 877, 880, 45 USPQ2d 1977, 1981 (Fed.Cir.1998). Therefore, "[w]hen determining the patentability of a claimed invention which combines two known elements, 'the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.' " In re Beattie, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed.Cir.1992) (quoting Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ at 488). As previously discussed in more detail in Appellant's Brief, the single applied reference G9400222.3 discloses at least two

embodiments of a quenching device wherein each disclosed embodiment deliberately includes a structure that produces turbulent, non-laminar flows of quenching gas. Specifically, with respect to the embodiment of Fig. 1 in that reference, as set forth on Page 6 of the English translation thereof, this embodiment includes nozzle plates (10) each of which directs a flow of quenching gas injected through the nozzles of the nozzle plates (10) from turbulent flows into (substantially) laminar flows. The single applied reference G9400222.3 does not itself even hint at the desirability of having the nozzle plates (10) provide such a laminar flow-promoting purpose; instead, the single applied reference G9400222.3 specifically discloses that the nozzle plates (10) are instead provided for the purpose of optimizing the cooling of the workpiece (4) by, for example, having the nozzle plates (10) serve as heat-exchange surfaces close to the workpiece surfaces. The Examiner, without support from the reference, states that when the nozzle plate (10) is placed above the workpiece (4), the cooling gas would flow in the lengthwise direction without rebounding. Thus, according to the Examiner (although not set forth in the reference), when the nozzle plates are placed above the workpieces, the cooling gas flow is without rebounding and reads on laminar flow. Therefore the Examiner is applying his own impermissible hindsight to draw the conclusion of derivation of laminar flow by the nozzle plates. As such it is believed that the claim rejections are improper.

The Examiner has also, as an afterthought and not before his Answer, included the notion that "the configuration of instant Figures 1, 3, and 4 as shown are substantially [the] same as Figure 1 of cited reference [such that the] cooling chamber of [the] cited reference is also capable of the claimed laminar flow." Further, he has not

given any explanation concerning what constitutes "substantially [the] same" as he has asserted that instant Figures 1, 3, and 4 are "substantially [the] same" as Figure 1 of the cited reference. (Answer, p. 5, last para. to p. 6.) The Applicant believes that the introduction of this new argument is improper, especially given the assertion that it is "substantially [the] same" and not that all the elements of the rejected claims are present such that "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains" as required under §103(a).

With regard to the argument advanced to support the rejection of Claims 6 and 8-20 under 35 U.S.C. §103(a), that each of cooling plates (11) of the cited reference is formed as a "tunnel" that individually surrounds a respective workpiece (4) remains an incorrect argument regardless of the singular use of the term "workpiece" on page 5, lines 16-18 of the reference. The reference simply states there that "[t]he cooling gas is aimed onto the workpiece or workpieces 4 in the desired direction of flow by the nozzles arranged in the nozzle plate or plates 10." This does not speak to the formation of a "tunnel" for every workpiece as suggested by the Examiner. Clearly, the guide channels having "a closed lateral surface" which "surrounds a respective . . . individual workpiece" is very different from a device with no such channels which simply uses nozzle plates to direct a flow of gas at workpieces. The figures of the cited reference support this conclusion, since none of the figures disclose these guide channels. Therefore, since the present invention teaches the goal of laminar flow and the means of using the guide channels to achieve such and the cited reference does

not teach or suggest guide channels or teach or suggest that the use of the channels would be obvious to one skilled in the art, the rejection is improper.

Therefore, it is respectfully requested that the rejections be withdrawn given the arguments outlined above, the previously filed Appellant's Brief, and the prosecution history. It is further requested that the application be placed in line for allowance.

Respectfully Submitted,



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